

REMARKS

I. Introduction

In response to the Final Office Action dated June 7, 2004, claim 40 has been amended. Claims 1-40 remain in the application. Re-examination and re-consideration of the application is requested.

II. Claim Amendments

The Applicant has amended claim 40 to place it in better form for appeal.

III. Premature Final Rejection

According to the Final Office Action,

"This is a RCE of applicants earlier Application No. 09/721,854 and 09/539,964. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office Action if they had been entered in the earlier application. Accordingly, THIS ACTION IS MADE FINAL even though it is a first action in this case."

However, this is contradicted elsewhere in the Final Office Action, which states:

"Applicant's amendment with respect to claims 4 and 24 have been considered, but are moot in view of the new grounds for rejection"

The Applicant therefore respectfully requests that the finality of the present rejection be withdrawn.

IV. Prior Art Rejections

A. The Office Action Rejections

In paragraphs (3)-(4) of the Office Action, claims 1-9, 14-16, 18-21, 23-25, and 28-40 were rejected under 35 U.S.C. §102(e) as being anticipated by Martin et al., U.S. Patent No. 6,061,562 (Martin). In paragraph (5) of the Office Action, claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Martin. In paragraph (6) of the Office Action, claim 13 was rejected under 35 U.S.C. §103(a) as being unpatentable over Martin in view of McKenna et al., U.S. Patent No. 6,377,802 (McKenna) and further in view of Emmons, Jr. et al., U.S. Patent No. 6,570,858 (Emmons). In paragraph (7) of the Office Action, claims 10, 17, 22, and 26-27 were rejected under

35 U.S.C. §103(a) as being unpatentable over Martin in view of Brown, U.S. Patent No. 6,157,621 (Brown). In paragraph (8) of the Office Action, claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Martin in view of Brown and further in view of Antonio et al., U.S. Patent No. 6,339,611 (Antonio).

With regard to all of the foregoing rejections, the Applicant simply disagrees with the arguments presented in the Final Office Action, and intends to appeal these rejections

In paragraph (9) of the Office Action, claims 4 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Martin in view of MacDoran et al., U.S. Patent No. 4,797,677 (MacDoran). Applicants' attorney respectfully traverses these rejections.

According to the Office Action:

"Martin didn't further disclose the antenna is unsteerable. MacDoran et al disclose the antenna is unsteerable (col 44, lines 52-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have an unsteerable antenna in order to point the antenna in one direction from one point to another point directly at the destined station."

As a threshold matter, the Applicants do not understand the proffered motivation for modifying the Martin reference ("to point the antenna in one direction from one point to another point directly at the desired station"). The antenna disclosed in MacDoran is "unsteered" because it is *omnidirectional*, not because the "communications platform maintains an apparent position relative to the user terminal within the beamwidth of the user terminal antenna" as recited in claim 4.

A tradeoff is therefore accomplished, that of abandoning a point positioning determination in which the geocentric position of the user (X_u, Y_u) and user clock offset (Δt_u) is deduced, traded for the determination of the differential location of station 2 relative to station 1. Consider FIG. 2. The unit vector \hat{S} is located at station 1 and points to the satellite signal source at a distance p_1 . The baseline vector \hat{B} points from antenna 2 (phase center) to antenna 1 (phase center in the case of an unsteered omnidirectional antenna).

Martin teaches the use of a steerable antenna directed at an airborne platform. If the omnidirectional antenna described in MacDoran were simply substituted for the Martin antenna as the Office Action suggests, the lower gain of the omni-directional antenna would render the system inoperable for its purpose. "If when combined, the references 'would produce a seemingly inoperative device,' then they teach away from their combination." *In re Gurlley*, 27 F.3d 551, 553, 31 U.S.P.Q.2d 1130 (Fed. Cir. 1994) (quoting *In re Sponnable*, 405 F.2d 578, 587, 160 U.S.P.Q. 237, 244 (C.C.P.A. 1969). One might be tempted to conclude that this can be cured simply by increasing the power of the transceiver on Martin's airborne platform, but this would further increase the weight,

complexity, and power consumption of the airborne platform, a result that is contrary to the teaching of Martin itself. Martin therefore teaches away from the modification suggested by the Final Office Action. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference's disclosure will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the Applicant. *In re Gurley*, 27 F.3d 551, 553, 31 U.S.P.Q.2d 1130 (Fed. Cir. 1994).

For all of the foregoing reasons, the Applicants respectfully traverse the rejection of claim 4. Claim 24 recites analogous features and is patentable for the same reasons.

V. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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